

Q2
1 8. (Amended) A lithium polymer secondary battery of claim 7,
2 wherein the ceramic is at least one [type] ceramic material selected from the group
3 consisting of Al_2O_3 , SiO_2 , ZrO_2 , MgO , and Na_2O .

12. (Amended) A lithium polymer secondary battery comprising
2 a positive electrode and a negative electrode for occluding and releasing lithium,
3 and a polymer electrolyte, wherein the polymer electrolyte is a gel polymer
4 electrolyte containing Al_2O_3 particles with particle size of 10 microns or less and 80
5 parts by weight or less of nonaqueous electrolyte solution, and the negative
6 electrode is mixed with said gel polymer electrolyte so that Al_2O_3 particles of 0.01
7 to 10 parts by weight are contained in 100 parts by weight of the active substance.

Q3
1 13. (Amended) A lithium ion secondary battery mainly
2 comprising a positive electrode using lithium transition metal compound oxide as
3 active substance, a negative electrode containing [at least one] an active substance
4 [selected from the group consisting of lithium] occluding and releasing lithium
5 [carbon, metal oxide and polymer], and an organic electrolyte solution, wherein the
6 negative electrode contains ceramic not relating to charge and discharge reaction of
7 battery, the ceramic being composed of at least one ceramic material [type] selected
8 from the group consisting of Al_2O_3 , SiO_2 , ZrO_2 , MgO , and Na_2O , by 0.01 to [20]
9 10 parts by weight in 100 parts by weight of active substance the shape of the
10 ceramic being granular and said particle size being 10 microns or less.

Q4
1 15. (Amended) A lithium ion secondary battery of claim 13,
2 wherein the ceramic is Al_2O_3 particles, contained by 0.01 to 20 parts by weight in
3 100 parts by weight of active substance].

REMARKS

Brief Summary of the Invention

The secondary battery of the present invention is a lithium battery, wherein mixing ceramic particles in the electrode results in ion conductivity enhancement and lowering of the internal resistance of the electrode. The use of at least one